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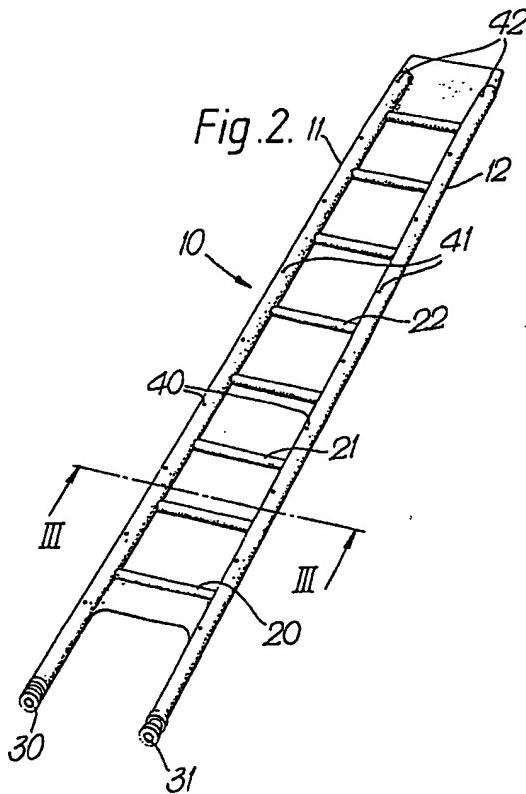
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None

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A5A
Selected US specifications from IPC sub-classes A62B
A62C

(54) Fire protection device

(57) A fire-protection device (10) consists of a pair of elongate tubular members (11, 12) held in spaced-apart parallel relationship by cross-members (20, 21, 22). Connectors (30, 31) are provided to admit a pressurising fluid and orifices (40, 41, 42) for the discharge of the fluid. The device may be made of a flexible material so that it can be rolled or folded for storage. Admission of the pressurising fluid (e.g. water or other fire-extinguishing fluid) causes the device to unroll or unfold. A second or subsequent device can be connected in series.



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Fig. 1.

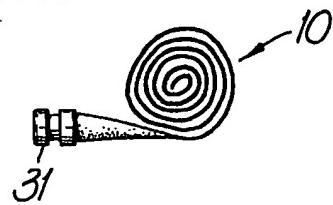


Fig. 2. II.

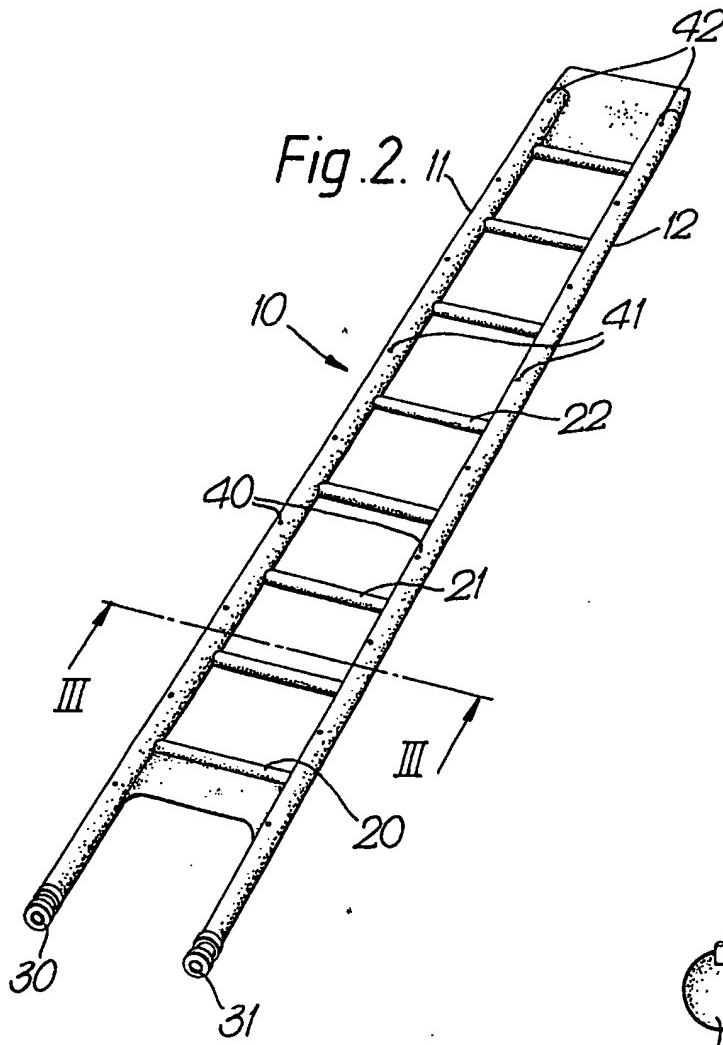
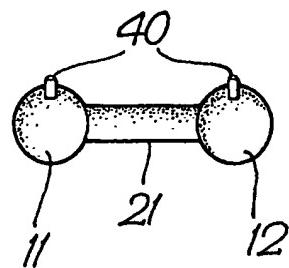


Fig. 3.



SPECIFICATION**Fire-protection device**

5 This invention relates to a fire-protection device for use as a safety screen against fire and/or to enable survivors or rescuers to proceed past a fire in safety.

Accordingly, the present invention provides a fire-protection device comprising a pair of elongate tubular members adapted to be held in substantially parallel spaced-apart relationship by a plurality of tubular cross-members, said elongate members being further provided with means to admit a pressurising fluid thereto and a plurality of orifices to discharge said pressurising fluid therefrom.

Preferably, the elongate members and cross-members are made of a flexible material, whereby the device can be rolled or folded when not in use and the admission of the pressurising fluid to the elongate members causes the device to unroll or unfold.

Suitable materials include flexible inextensible materials, for example rubberised fabrics or woven synthetic fluid-impermeable fabrics.

25 In a first preferred embodiment of the present invention, the cross-members interconnect with the elongate members.

In a second preferred embodiment, the elongate members and the cross-members are so disposed relative to one another that the device is caused to assume a ladder-like configuration on admission of the pressurising fluid.

The means to admit the pressurising fluid to the elongate members can be, for example, hose-

35 couplings.

The pressurising fluid used will depend upon the type of fire involved. Suitable pressurising fluids include water, gases (such as carbon dioxide), organic fire-control materials (such as halogenated hydro-

40 carbons) or chemical foams (such as organic foams).

Devices according to the present invention can be used in a variety of different fire situations, e.g. aircraft fires, fuel fires, gas or electric fires and/or leaks and fires in store rooms.

45 A preferred embodiment of the present invention will be illustrated, merely by way of example, in the following description and with reference to the accompanying drawings.

In the drawings:

50 *Figure 1* is a schematic side view of a device according to the present invention, shown in the rolled condition;

Figure 2 is a schematic perspective view of the device of *Figure 1*, shown in the extended condition;

55 *Figure 3* is a section on line III - III of *Figure 2*.

Referring to the drawings (wherein like numerals denote like parts) the fire-protection device 10 comprises two elongate tubular members 11 and 12. These are held in parallel spaced-apart relationship 60 (as shown in *Figure 2*) by intervening tubular cross-members (three indicated at 20, 21 and 22) so that the device in the extended condition assumes a ladder-like configuration.

Hose couplings 30 and 31, known *per se*, are provided to admit a pressurising fluid to the elongate

members and a plurality of discharge orifices (three pairs indicated at 40, 41 and 42) are likewise provided for the discharge of the pressurising fluid.

As shown in *Figure 1*, the device can be rolled up

70 when not in use.

In use, pressurising fluid is admitted to couplings 30 and 31 and the device unrolls to assume a ladder-like configuration. Pressurising fluid is discharged via the discharge orifices to form a protective

75 screen against the fire.

Essentially, the device of the present invention is self-deploying.

When the device is in position the initial pressure of the pressurising fluid can be adjusted so as to

80 permit consequential adjustment of the pressure of the fluid being discharged from the discharge orifices. For example, where water is used as the pressurising fluid, the pressure can be adjusted so as to produce a spray or mist from the discharge orifices 85 (to "scrub" water-soluble gases from the surrounding air) or to produce solid jets of water (to dilute any gas present in the surrounding air).

The preferred ladder-like configuration gives stability during the "unrolling" stage, permits negotiation of obstacles (e.g. kerbs, rough ground or debris) and maintains the discharge orifices in correct orientation.

If desired, a second or subsequent device can be connected to the first device after deployment.

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CLAIMS

1. A fire-protection device comprising a pair of elongate tubular members adapted to be held in substantially parallel spaced-apart relationship by a plurality of tubular cross-members, said elongate members being further provided with means to admit a pressurising fluid thereto and a plurality of orifices to discharge said pressurising fluid therefrom.

2. A device according to Claim 1, made of a flexible material.

3. A device according to Claim 1 or 2, made of a flexible inextensible material.

4. A device according to Claim 2 or 3, made of a rubberised fabric or a woven synthetic fluid-impermeable fabric.

5. A device according to any one of Claims 1 to 4, in which the cross-members interconnect with the elongate members.

6. A device according to any one of Claims 1 to 5, in which the elongate members and the cross-members are so disposed relative to one another that the device is caused to assume a ladder-like configuration on admission of the pressurising fluid.

7. A device according to any one of Claims 1 to 6, in which the means to admit the pressurising fluid to the elongate members comprise hose-couplings.

8. A device according to any one of Claims 1 to 7, in which the pressurising fluid is water.

9. A device according to any one of Claims 1 to 7, in which the pressurising fluid is a gas.

10. A device according to Claim 9, in which the gas is carbon dioxide.

11. A device according to any one of Claims 1 to

7, in which the pressurising fluid is an organic fire-control material or a chemical foam.

12. A fire-protection device, substantially as hereinbefore described, with reference to and as illustrated in the accompanying drawings.

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